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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,477	07/15/2003	Andrew Joo Kim	07982.105018	8614

7590 08/25/2005
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EXAMINER

GHULAMALI QUTBUDDIN

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,477	KIM ET AL.	
	Examiner	Art Unit	
	Qutub Ghulamali	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10,12-28 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-10 and 12-25 is/are allowed.
- 6) ☒ Claim(s) 26-28 and 30-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/1/05, 11/8/04, 8/13/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement

1. This Office Action is responsive to the Amendment filed by the applicant on 03/22/2005.
2. Amendment to claims 1, 3-9, 10, 12-28, 30-35, filed by the applicant on 03/22/2005, is hereby acknowledged.

Response to Arguments

1. Applicant's amendment of independent claims 1, 10 and 20, filed 03/22/2005, has been fully considered and are persuasive. The rejection of claims 1, 10, and 20 has been withdrawn. Further, applicant's amending claims 5, 6, 9, 11, 15, and 26, satisfy the 35 USC 112, 2nd paragraph requirements and therefore, rejection cited in Office Action of 9/22/2004, has been withdrawn.
2. Claims 1, 3-9, 10, 12-19, 20-25 allowed.
3. However, applicant's amendment of independent claim 26 has been considered but is moot in view of the new ground(s) of rejection necessitated by the applicant's amendment.

The rejection follows:

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26-28, 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monzello et al (USP 5,428,831) in view of Lindell et al (US Pub. 2003/0008628).

Regarding claim 26, Monzello discloses, a communications signal comprising:

Receiving a communications signal (receiving antenna 104) (col. 7, lines 65-67);

determining a quality of communication signal (the processor receives error signals and tries to minimize the error signals) after the conditioning filter using a low pass filter (fig. 2, elements 154, 156) followed by an analog-to-digital converter (162, 164) to digitize output of the low pass-filter and estimating the-quality of the digital output from the analog-to-digital converter with a microcontroller (166) (col. 7, lines 25-55);

in response to determining the quality of the received communications signal, adjusting one or more parameter of the conditioning filter with the microcontroller to improve the quality of the communications signal (col. 7, lines 25-50).

Monzello, however, does not explicitly disclose applying an adjustable linear conditioning filter that compensates for signal distortions. In the same field of endeavor, Lindell discloses applying an adjustable linear conditioning filter (figs. 3, 18, element 303, 331) that compensates for signal distortions (col. 4, section, 0066, 0072). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an adjustable or tunable conditioning filter as taught by Lindell in the system of Monzello because it can provide adequate conditioning of the incoming signals to achieve response characteristics desired to minimize the errors.

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Regarding claim 27, Monzello discloses adjusting one or more parameters of the linear conditioning filter further comprises adjusting one or more variable gain amplifiers (fig. 2, elements 158, 160) (col. 7, lines 10-24).

Regarding claim 28, Monzello discloses propagating the received signal through a series of delay lines (182, 188) with each delay handling approximately the same delay value (col. 9, lines 38-49).

Regarding claims 30, 31, Monzello discloses the microcontroller' uses coordinate descent and ascent (high and low values) to improve the quality of the communication signal (col. 9, lines 14-38).

Regarding claims 32 and 33, Monzello discloses adjusting a reference voltage with the microcontroller via a digital-to-analog converter to generate a value of a cumulative distribution function at the output of the low pass filter (col. 10, lines 3-21).

Regarding claims 34 and 35, Monzello discloses analyzing the cumulative distribution function with the microcontroller to adjust the parameters of the conditioning filter (col. 11, lines 13-55).

Allowable Subject Matter

6. Claims 1, 3-10, 12-25 allowed.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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US Patents:

Wong (USP 4,873,700) discloses an adaptive auto threshold equalizer.

Kammeyer et al (USP 4,646,173) shows converting and decoding receiver for digital data recording.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014.

The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.
August 22, 2005.



JAY K. PATEL
SUPERVISORY PATENT EXAMINER